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Emerald Article: Twenty-five years of social and environmental accounting research: Is there a silver jubilee to celebrate?

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Twenty-five years of social and environmental accounting research

Is there a silver jubilee to celebrate?

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Introduction

One of the major growth areas within accounting in the last five years has been "accounting for the environment", which has generated interest well beyond the confines of accounting academics and professional accountants. Managers, the media, politicians and the public have noted environmental and, therefore, social problems which may be addressed, in part at least, by identifying, measuring and (perhaps) valuing the interactions between business and the environment. This has not been the situation in the past, and the review which follows identifies the ebb and flow and changing fortunes of the various activities within the overall field of social and environmental accounting. It is important that we do not lose the current momentum, because this field of study must lead to action and change in the relationship between business, the stakeholders which make up society, and the environment which we need to support us all.

The objectives of this paper are:

- to review the past 25 years of social and environmental accounting literature (SEAL);
- to provide a structure to enable readers and intending researchers to organize the literature;
- to comment on trends which appear evident from a systematic study of the literature; and
- to offer a detailed bibliography as a starting point for those interested in this area.

The start of the chosen period coincides with the publication of a number of important contributions (see Beams and Fertig, 1971; Churchman, 1971;

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Linowes, 1972; Mobley, 1970), and ends just prior to the symposium on environmental accountability issues in Canberra in February 1996 (that is, 1971-1995).

This paper uses three time periods and a number of sub-groups. The rationale for this pattern is outlined in the section on methodology; the author argues that this is a logical division of the literature, while acknowledging that alternative structures could be devised, such as country of origin or accounting sub-group. It is argued that the key issues in a review are to recognize trends and developments in the literature without becoming too deeply mired in a detailed examination of any particular contribution, and to avoid becoming unconsciously selective and favouring particular areas.

This paper is organized as follows: the introduction is followed by sub-sections on methodology; then the literature is examined in respect of each of the time periods, and then placed into one or more of the categories or sub-groups. Finally, the paper provides concluding comments, including an attempt at determining where SEAL was and where it might progress in the future.

Methodology

The three time periods used are: 1971-1980, 1981-1990 and 1991-1995. The sub-headings employed are: empirical studies, normative statements, philosophical discussion, the non-accounting literature, teaching programmes and text books, regulatory frameworks, and other reviews of the literature. Within this framework, contributions will be examined in chronological order. In addition to the list of references, a bibliography divided into the same categories has been attached as an Appendix.

The time period has been divided at 1980 and 1990. The first division is considered appropriate because that date has been used by some UK researchers as marking a major change in thinking following the Thatcher electoral victory in the UK, and also because the specialist accounting journals which encourage research in this area were set up in the decade beginning in 1980. The second division coincides with the publication of Pearce *et al.* (1989) and the response by Gray (1990) which is regarded by many as the start of a new era of interest in environmental accounting matters.

The sub-sections are a relatively loose means of comparing similar and dissimilar contributions, and also act as a guide to the relative proportions in each category. The descriptions are self-explanatory, although the separation between normative statements and philosophical discussion was more difficult than anticipated. In many cases, it was a matter of how strongly the author(s) made their arguments, and/or how focused or general the points were that were being made.

This is a personal review in which the author makes many choices; what to include and what not to include, under which sub-heading or heading a particular subject should appear, and the emphasis to be given to particular developments. It is appropriate to acknowledge a previously stated position in favour of evolution rather than revolution, which some readers may construe as placing limitations on the review:

> …it must be stated that this book is based upon existing socio-economic conditions of a managed mixed economy and is evolutionary rather than revolutionary in orientation. The position argued is that a more socially responsible accounting may be justified and should be implemented, not to radically change society but to modify and improve our present system, by including measurement and reporting relationships which are currently excluded (Mathews, 1993, p. 6).

However, a deliberate effort has been made to balance any predisposition towards evolution by a deliberate inclusion of some radical sources of literature.

Definitions of social and environmental accounting

Social and environmental accounting has been defined by Gray *et al.* (1987, p. ix) as:

> …the process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and to society at large. As such it involves extending the accountability of organizations (particularly companies), beyond the traditional role of providing a financial account to the owners of capital, in particular, shareholders. Such an extension is predicated upon the assumption that companies *do* have wider responsibilities than simply to make money for their shareholders.

And by Mathews (1993, p. 64) as:

> Voluntary disclosures of information, both qualitative and quantitative made by organizations to inform or influence a range of audiences. The quantitative disclosures may be in financial or non-financial terms.

And also by Gray *et al.* (1993, p .6) who defined environmental accounting in the following terms:

> …it can be taken as covering all areas of accounting that may be affected by the business response to environmental issues, including new areas of eco-accounting.

Definitions applicable to SEAL do not appear to be problematic, despite some differences, especially where authors cannot decide whether disclosures are expected to be voluntary, or in compliance with legal or quasi-legal requirements, or whether disclosure must be quantitative or financial, to be regarded as a part of the accounting process. The definition which implicitly governs this survey of the literature is broad, as provided by Mathews and Perera (1995, p. 364):

> At the very least, social accounting means an extension of disclosure into non-traditional areas such as providing information about employees, products, community service and the prevention or reduction of pollution. However, the term "social accounting" is also used to describe a comprehensive form of accounting which takes into account externalities...Public sector organisations may also be evaluated in this way, although most writers on the subject of social accounting appear to be concerned with private sector organisations.

The period 1971-1980

Introduction

The first period considers the literature from a time when the subject was introduced (Beams and Fertig, 1971; Churchman, 1971; Linowes, 1972; Mobley,

1970) to the end of the decade, by which time a reasonably large volume of empirical work had been published, together with a number of papers explaining the building of models to foster social accounting disclosures.

During the period 1971-1980, the social and environmental accounting literature (SEAL) was underdeveloped. Journals such as *Accounting, Auditing & Accountability Journal* (*AAAJ*, 1988); *Critical Perspectives in Accounting* (*CPA*, 1990); and the *Journal of Accounting and Public Policy* (*JAPP*, 1982) were not in existence, and *Accounting, Organizations and Society* (*AOS*, 1975), while sympathetic to SEAL, had also been concerned with behavioural and organizational aspects of accounting. The leading North American accounting research journals were almost as inaccessible to SEAL then as they are now, with perhaps the exception of *The Accounting Review*'s publication of Ramanathan's paper (1976).

It will become apparent in the sections that follow that the majority of SEAL between 1971 and 1980 was directed to reporting fairly unsophisticated empirical studies, which attempted to measure the amount of new information being produced and published by a limited number of enterprises. This was accompanied by a relatively small volume of normative and philosophical contributions. Furthermore, environmental matters were not often identified separately at this time (Dierkes and Preston (1977) and Ullman (1976) were exceptional), but treated as part of a generally undifferentiated social accounting movement.

The material is now presented in the groups outlined previously, beginning with empirical studies.

Empirical studies

As indicated above, early empirical studies were not specific in focus. It was a matter of attempting to develop methods to measure the incidence of information disclosure by organizations which was voluntary, tentative, frequently unreliable and unorganized. The focus of these disclosures, if there was one, often changed from one period to another.

The typical outcome of many studies was a "yes" or "no" to the existence of a disclosure of information related to the social dimension of accounting, most frequently connected with employees or product (Ernst and Ernst, 1972-1978). Environmental concerns were "invisible" at that time, whether by managers, accountants, or the majority of other observers: the Ernst and Ernst surveys included three environmental categories out of 27 (Ernst and Ernst, 1978, pp. 22-8) This yes/no analysis was developed over time to include measures of volume (pages, lines, words, etc.) in specific areas, which also brought problems of subjectivity (what should be included and what should not be, and consequent issues of replicability). Measures of the volume of different types of information could also be related to characteristics of the disclosing organizations, such as size or industry, and profitability or capital market performance.

This early literature is still of interest, since this type of research reappears from time to time, and now includes environmental disclosures (see Abbott and Monsen, 1979; Anderson, 1980; Belkaoui, 1980; Bowman and Haire, 1975; Ernst and Ernst, 1972-1978; Grojer and Stark, 1977; Trotman, 1979). This early work suffered from problems with subjectivity of analysis and was also difficult to reproduce. There was also no sound theoretical base. A more detailed analysis of the studies published in the period 1975-1984 can be found in Mathews (1993, pp. 12-23 and Chapter 5).

The accounting firm of Ernst and Ernst produced a series of analyses of the annual reports of *Fortune* 500 companies between 1972 and 1978 (1971-1977 annual reports). Towards the end of the series, disclosure rates for socially-oriented information occurred with about 90 per cent of the annual reports, but the average volume was about half a page (Ernst and Ernst, 1978, p. 1).

Early empirical studies had a variety of motivations. Bowman and Haire (1975) was one of the earliest studies which looked for a relationship between social responsibility disclosures and increased income to the corporation. It was found that the highest return on equity was associated with a medium level of social responsibility disclosures. In a Swedish study of about the same period, Grojer and Stark (1977) were concerned with developing a goal-oriented report giving explicit consideration to several constituencies, particularly employees. Abbott and Monsen (1979) found no meaningful effect from a study of 450 corporations in the 1975 Fortune 500 list, when they compared a social involvement disclosure scale rating with total returns to investors over the period 1964-1974. Total returns to investors did not vary between high- and low-involvement firms.

Australian studies were quite advanced during the later 1970s and Trotman (1979) showed an increased incidence of social disclosures by the largest corporations listed on the Sydney Stock Exchange. Disclosures were analysed by categories and quantified. Anderson (1980) surveyed Australian accountants to find out their attitudes towards voluntary disclosure of social responsibility data in annual reports. In general there was support.

Belkaoui (1980) is an example of an experiment designed to test whether users of accounting reports react differently when provided with explicit disclosures of social information. Belkaoui found that bankers reacted more favourably to this stimuli than did accountants.

Normative statements

A limited number of models, which may be taken to be normative statements, were published between 1971 and 1980. Like the empirical studies in the previous section, most of these models did not concentrate solely on social or environmental issues, but included a wide variety of material. The most frequently cited contributions are those of Dierkes and Preston (1977), Dilley and Weygandt (1973), Estes (1976a, 1977), Linowes (1972), Ramanathan (1976) and Ullmann (1976).

Linowes (1972) offered a socio-economic operating statement which was intended to quantify, in financial terms, the interaction of the organization with people, product and the environment. This early attempt at model building and quantification is inconsistent with most of the literature dealing with externalities as costs or benefits to the future environment. Linowes (1972) is a modification of traditional historical financial accounting, which recognizes private but not public costs. There is no provision for recognizing or measuring the volume of discharges and their subsequent effects on the environment.

Dilley and Weygandt (1973) provided a statement of funds flow for socially relevant activities for a power station. Although perhaps of greater applicability than that of Linowes (1972) this model still concentrates on the past and present, rather than the future, and uses exclusively financial measurement. The future costs to the public are not calculated and benefits are not evaluated, except in terms of current costs (Mathews, 1993, p. 140) Once again, the environmental area is not separated from other social impacts.

Ramanathan (1976) is regarded as a seminal conceptual contribution to the literature, although, with hindsight, we can see that the contribution has been to the development of the concept, rather than the practice, of social accounting. He proposed a number of objectives and concepts for social accounting, some of which would also encompass the physical environment. Externalities affecting different social segments were to be identified and measured, and included in the periodic net social contribution from individual firms (p. 527). The concept of social overhead was developed as an offset against traditional measures of income, "social overhead is the measured value of a firm's negative externalities, and social return is the measured value of its positive externalities" (p. 527). Unfortunately, Ramanathan did not provide (and has not since provided) more detailed suggestions on how these figures may be calculated.

Ullmann (1976) offered an early model devoted entirely to the environment. Called the corporate environmental accounting system (CEAS), it used a non-monetary measurement, known as an "equivalent factor", in conjunction with physical measures of environmentally-relevant inputs and outputs to derive CEAS units. The CEAS units are presented in the form of a balance sheet which includes environmental impacts of the production process and those of customers for the product produced if not subject to CEAS, but less the impact of those products sold to customers which are subject to CEAS. The cost to third parties (the public) of discharges (externalities) is not included. This is an interesting model which represents one of the early attempts at a different form of accounting; non-financial disclosures aimed at reporting environmental impacts. It represented a new departure compared to Linowes (1972), which was based on historical financial accounting.

Estes (1976a) attempted to model systematically the impact of the organization on the environment, and to make disclosures via a social impact statement which listed social benefits and social costs. Environmental damage included damage to terrain, air, water, noise, visual and aesthetic and other forms of pollution, and solid-waste production. The intention was to show a social outcome, cost or benefit at the end of the period. Cash flows were used as the basis of disclosure, while measurement necessitated valuations using surveys, avoidable and restoration costs, and surrogate valuations and shadow prices. Discount rates would have been needed to convert future costs of externalities to present values for use in the statement. Difficulties with the model appear to stem from the level of sophistication of information that was required and the availability of that information. Financial data were to be used to determine a surplus or deficit as an alternative to the traditional income statement, but the limitations of the process were perhaps not seen as clearly as they should have been.

Estes (1977) was a multi-column version of the 1976 model, with separate columns for customers, employees, etc. This modification only added to the complexity of the original statement. The ideas contained in the 1976 model were useful but perhaps unrealistic, in that historical financial accounting was to be stretched in an attempt to cover a wide area.

Dierkes and Preston (1977) reviewed several extant proposals but found most to be unsatisfactory, since they noted that any proposal for an accounting for environmental impacts needs to have a systematic framework, but not one which aims to bring all events to a common valuation (as in Estes (1976a), for example). The Dierkes and Preston (1977) model is based on inputs and outputs, and uses description and non-financial quantification rather than any attempt to put a financial quantification on externalities. A detailed examination is beyond the scope of this paper (refer to Mathews, 1993, pp. 145-8), but it should be noted that Dierkes and Preston (1977) were perhaps the first authors to identify three uses for environmental impact costs, if these could be obtained:

(1) to inform taxation proposals;

(2) as a basis for recognition between affected parties; and

(3) as effluent charges to be levied against the source of pollution to force internalization and thus the removal of externalities.

Philosophical discussion

Although Mathews (1993) has attempted to argue that there are various justifications for the activities that are now described as social and environmental accounting, at the time, there seems to have been relatively little curiosity expressed about the motivation of those making disclosures.

The empiricists were trying to identify, measure and report what was being disclosed in annual reports and financial statements, with some attempt to find whether there were any causal relationships between volumes of data and firm characteristics; but not attempting to determine why these disclosures were being made in the first place. The social contract approach from politics and philosophy had not yet been borrowed for use in the accounting literature, although some of the normative statements were implicit users of these arguments, and the organizational legitimacy argument (Dowling and Pfeffer,

1975) had not been considered within accounting. The other area which was of major interest related to employees, either in the form of employee reports or value-added statements.

Radical/critical literature

There is an interesting contrast between the three parts of this review. During the 1970s, the radical/critical theory literature as we know it today was far less developed. Those who researched non-traditional disclosures or wrote in support of socially-related disclosures were regarded as both radical and critical, because they were explicitly or implicitly criticizing the current structure of the discipline: historical financial accounting reports for shareholders and creditors (Estes, 1976a; Linowes, 1972). It was later that some of these writers were themselves criticized for being prepared to modify rather than replace the system within which accounting was situated.

Non-accounting literature

The literature of other disciplines has always had a strong influence on accounting research since many accounting academics come from other disciplines, or use models from other disciplines in order to view accounting problems through a different lens.

Many of the early writers in the area of social accounting (as we now designate it) came from the management discipline, or published in management journals. For example, Bowen (1953) wrote about the social responsibilities of business and in contrast Friedman (1962) was concerned to remind readers that the main purpose of business was to maximize profits. Other relevant contributions included those of Davis (1973; 1976); Eberstadt (1973) and Parket and Eilbert (1975). Shocker and Sethi (1974) have been credited with bringing the social contract argument to the notice of those seeking a basis for extending the monitoring of private sector organizations as a legitimate aim of social policy development (Lindblom, 1983). In general, these authors did not attempt to prescribe courses of action, but served to stimulate interest and response by accounting academics already interested in extending the role of accounting.

The attempts by some economists to develop cost-benefit techniques in their search for solutions to public funding problems (Dasgupta and Pearce, 1972; Mishan, 1972, 1975; Prest and Turvey, 1965) could be argued to be a contribution to the social area, although the techniques employed were technicist and reductionist in nature (Churchman, 1971).

As noted in the sub-section above, the philosophical/political influence was not generally felt until after 1980. However, the influence of environmental economics was important to some of the normative statements which sought to value externalities in order to determine a more appropriate private cost of organizational activity. Of course, economists did not (and could not) agree on how to protect the environment. However, they have contributed ideas on how to generate shadow prices, determine the value of recreational activities, and use subsidies, taxes and standards to influence environmental discharges (see Siebert and Antal (1979) for a readable account of the economists' view of environmental protection).

As detailed in Gray *et al.* (1987), this period was notable for extensive developments in the field of social audit, with studies by Social Audit Limited, Counter Information Services, and local authority social audits. In many cases, these audits were overtly political documents designed to apply pressure towards radical changes in industry and society.

Teaching programmes and textbooks

During the period 1971-1980, there were few if any documented efforts aimed at introducing students to the ideas of social and environmental accountants (Estes (1976b); Johnson (1979); and Livingstone and Gunn (1974) could have been used as graduate level readings). Although graduate students may have been aware of the research activities of their instructors, there does not appear to have been any attempt to publish information about the educational potential of these new ideas.

It should be noted that the extant outlets for accounting research did not regard education as a suitable subject for publication; it was a process which was thought to take place, but it was not part of the research activity of an academic!

Regulatory frameworks

There was much less regulation of financial accounting in the period 1971-1980, compared to 1995, and none in respect of environmental accounting, although common law provisions would have applied. The proposals contained in *The Corporate Report* (Accounting Standards Steering Committee, 1975) and the UK Government Green Paper (HMSO, 1977), could be said to offer some support to social accounting, but not enough to be described as regulation. The US conceptual frameworks (American Institute of Certified Public Accountants, 1973) did not provide assistance, and the American Accounting Association (AAA) studies of social accounting provided only mild persuasion and exhortation (AAA, 1975).

The development of social and environmental accounting has tended to follow that of financial accounting, with a reluctance on the part of the professional organizations to develop standards or regulatory frameworks.

Other reviews of the literature

The author is not aware of any reviews of the state of social and environmental accounting written during this time, other than those reviews which accompanied the literature survey at the beginning of an article or paper. This is not surprising, given the relatively small volume of literature at the time.

Summary

In summary, the period 1971-1980 was not one in which the environment was on top of the list for accounting academics and policy makers. Those researchers and writers interested in the social dimension were generally more concerned with what would now be called "social accounting", especially disclosures relating to employees and product. The empirical studies included environmental issues as part of a large portfolio of interests, and many of the studies were descriptive and relatively unsophisticated by later standards.

There were a number of interesting normative statements or models, including those which were concerned with the measurement, valuation and disclosure of externalities and, therefore, with the protection of the environment. There were two main approaches: those which were attempts to modify historical financial accounting, and to find financial measures for new identities; and those which took a broader view of the task, and recognized that improvements were more likely to come from attempts to develop new measures, including those which were non-financial. With the benefit of hindsight, we can see that most of these models have been superseded by approaches based on regulations, standards, audits, taxes, permits and licences, as well as improved disclosure, often employing non-financial quantification.

As noted in the remaining sections, there was relatively little activity of importance to report, excepting perhaps the potential influence of the environmental economics literature, which appears to have been part of the next time period. The management literature contained timely reminders of the need for business to be concerned about social matters. The writers of this period did not appear to consider that the subject matter of social and environmental accounting was suitable for *undergraduate* students and specialized textbooks were not available. Regulatory frameworks were also largely absent since financial accounting standards had not been developed to any extent at this time, and early conceptual frameworks either did not accept the social dimension (USA), or these were not accepted by the wider body of accountants (UK).

The period 1981-1990

Introduction

The second period is complex, with the first part of the decade showing increased sophistication within the social accounting area, prior to an apparent transference of interest to environmental accounting in the second part of the decade. An increased interest in the educational aspects of SEAL was also noticeable.

Since 1980, there have been many changes to the focus of the social and environmental accounting literature, with increasing signs of specialization. For example, employee reports and value-added statements attracted a separate group of adherents in the early 1980s (Burchell *et al*., 1985). General social disclosures have become of less concern, in that they have been replaced by a concentration on environmental disclosures and regulation as an alternative means of reducing environmental damage. Normative statements and model building have almost disappeared, except in the environmental area.

The development of teaching programmes which include an exposure to social and environmental accounting issues had its roots in this period. In some cases, textbooks on accounting theory have included references to social and environmental accounting issues. Conversely there are other texts, influenced by agency theory, which ignore these issues completely. There are also a small number of specialist texts. The increased regulation of accounting disclosures by means of conceptual frameworks, legally enforceable accounting standards, and legislation is a feature of this period and, in general, this will work towards the end desired by many social and environmental accountants when applied to these courses.

There has not been any great advance in the valuation of externalities and their internalization, other than through legislation and audit, but some of the literature is directed at the self-interest of business, by indicating the cost savings to be made by waste control and reprocessing, or the increased revenue which could be obtained with a "green" marketing strategy directed at products, services and processes. These various themes are continued in greater depth in the sub-sections which follow.

Empirical studies

Research conducted since 1981 has changed in both direction and sophistication. Those studies which continued to examine the incidence of social accounting disclosures (that is not separating out disclosures relating only to the environment) have paid greater attention to methodology in order to reduce subjectivity and increase the replicability of content analysis and, in many cases, have attempted some explanation of the source, direction and type of disclosures (Arlow and Gannon,1982; Belkaoui and Karpik, 1989; Brooks, 1986; Freedman and Jaggi, 1982, 1988; Guthrie and Mathews, 1985; Guthrie and Parker, 1989b; Mahapatra, 1984; Rockness, 1985; Shane and Spicer, 1983; Trotman and Bradley, 1981; Ullmann, 1985, for example).

Attempts to explain the motivation behind any given level of information disclosure have not proceeded very far, being restricted to a limited foray into the area of organizational legitimacy (Guthrie and Parker, 1989a).

There are a number of criticisms of content analysis studies because, it is claimed, the work reports only what currently exists, or has existed, without reference to normative positions about what should be; often lacks a theoretical basis; and provides indirect support for disclosures which are concerned mainly with improving the image of the organization, and maintaining the status quo in terms of social structures (Burke, 1984; Wiseman, 1982). Furthermore, where it has been possible to check the information provided, the accuracy has been low (Rockness, 1985).

The author has some sympathies with the general concern about description, compared to the development of a theoretical basis for extending disclosures. Nevertheless, a limited amount of this type of research is necessary in order to monitor the extension of accounting disclosures, otherwise there is the possibility of theorizing in a vacuum. The omission of studies which attempt to link concepts of motivation with organization characteristics and volume/type of disclosure is unfortunate. Obtaining data on the stated reasons why some management invest scarce resources in making additional disclosures, while others conform to minimal reporting requirements, would be useful in the further development of theories about motivation.

Normative statements

A feature of the period since 1980 has been the absence of model building of the type described in the corresponding section of the earlier time period. This may be partly a function of the type of analytical framework used, since it is often a subjective assessment whether an item is a normative statement, part of a philosophical discussion, or belongs as part of the radical/critical literature; in some cases more than one category might be appropriate.

The term is used here to identify those contributions which put forward specific proposals, rather than only discuss the issues or critique what others have done, or the context in which the work proceeds. The resulting list, which is an example only, is rather short, which may mean that the separation criteria are problematic. The main contributions listed here are Brooks (1986); Burke (1984); Mathews (1984); Logsdon (1985); and Wartick and Cochran (1985).

Burke (1984) and Brooks (1986) are Canadian contributors. Burke designed a detailed social accounting information system (SAIS), and a detailed empirical study of social disclosures in Canada by Brooks (1986) also recommended a corporate social performance framework. Mathews (1984) put forward a conceptual model for the categorization of various forms of socially-oriented disclosures, which may be familiar to some as the basis for Mathews (1993). One feature of this structure was the separation of social responsibility accounting from total impact accounting, an early proposal to separate environmental accounting from social accounting.

Logsdon (1985) put forward a model which predicted the responses of certain organizations to the evolution of a social issue. Although the specific study related to the oil refining industry in the USA, the author has always thought that there was an opportunity for generalization to other industries and situations. Wartick and Cochran (1985) attempted to develop a corporate social performance model.

Philosophical discussion

In this period, there appear to have been two main areas of philosophical discussion (in terms of the framework used here, that is not providing normative statements or being part of the radical/critical literature). These are exchanges about the extent to which accountants should be involved in the social and environmental accounting areas (Benston, 1982a, 1982b, 1984; Schreuder and Ramanathan, 1984a, 1984b), and attempts to borrow concepts such as the social contract and organizational legitimacy to justify the development of accounting disclosures which would benefit non-traditional user groups (Donaldson, 1982; Richardson, 1985, 1987; Richardson and Dowling, 1986).

Some of the best-known contributions would be Parker (1986) and Gray *et al.* (1988), and the textbooks referred to below. A recurring theme is the opportunity for the accounting discipline to adopt a different perspective, and assist in undoing some of the environmental damage caused by short-term policies, which were aided by traditional financial accounting which does not value externalities. Hines (1988) made an important observation on the process by which accountants make decisions which have far-reaching consequences. As our chronology moves closer to the end of this period (1990), the volume of published literature devoted to social accounting diminishes in favour of an expansion of that dealing with environmental matters.

The environmental accounting literature contains a range of views which may be categorized as light green to dark green, with the former suggesting that environmental problems are not potentially disastrous for the planet, and the dark green tending towards the radical ecologists' position that disastrous consequences are imminent. Another dimension runs from "accounting" to "economic" in orientation, from those environmental accountants who advocate a traditional "accounting" view (of regulation, standards, audit, enforcement, and penalties for non-compliance) through fiscal measures to those who would implement a more "economic" approach using inducements such as pollution permits and other market-oriented actions in an attempt to avoid regulations. There may be a correlation between "greenness" and a preference for regulation and prohibition, and a distrust of market-based measures, because it is argued that the unfettered market has caused many of the environmental problems in the first place.

Alternative and competing views on social and environmental accounting are presented by some contributors to the radical/critical literature, but seldom by other parties, except the Benston versus Schreuder and Ramanathan debate previously referred to, although Donaldson's view of the social contract is challenged by Den Uyl (1984).

The sheer volume of the contributions to the general advocacy of environmental accounting appears to ensure the continuation of activity in this area for some time. However, the majority of the interest continues to come from a limited number of participants and, therefore, at the expense of the development of the broader field of social accounting. A continuation of interest does not necessarily translate into research output or practice.

Radical/critical literature

Just as the environmental accounting literature has flowered since the late 1980s, so the last ten to 15 years have seen the development of a radical/critical theorist literature, which has addressed what the authors perceive to be the shortcomings of previous work in the areas of business ethics, the performance of the accounting profession, plant closures, control processes, and the pervasive influence of accounting as a means of preserving the status quo by supporting capital over labour interests (Cooper and Sherer, 1984; Laughlin and Puxty, 1986; Tinker, 1985). Attention has also been drawn to what some see as the shortcomings of the emergent social and environmental accounting literature. In total, there is sufficient of these contributions to enable specialist journals (*Critical Perspectives on Accounting; Advances in Public Interest Accounting*) to expand after only a few years in existence.

The mainstream environmental accounting literature has benefited from an interchange of ideas and philosophies. For example, the exchange between Parker (1986) and Puxty (1986) provided insights into alternative views of a developing area.

Non-accounting literature

The non-accounting literature listed in the Appendix is related to three issues. First, a philosophical justification for non-traditional, socially-oriented accounting, such as the social contract. This was discussed at length in Donaldson (1982) and, although a relatively aged contribution, this may be seen as the start of a rich vein of philosophical material. Second, an explication of the basis for concern about the environment can be found in Elkington (1990) and similar works in the environmental/ecological/sustainability field. Third, there are the contributions from environmental economics represented by Pearce *et al.* (1989). It was the response to this work by Gray (1990) which could be said to be the start of the latest developments in the environmental accounting literature to be discussed in the next section.

The non-accounting literature appears to be of lesser importance than previously, excepting that which provides arguments in favour of sustainability and prevention of environmental degradation. The economics literature is perhaps accorded less standing than in the 1970s (Gray, 1990). The philosophical literature is important where model building is seen as important and, as noted above, this activity also appears to be accorded less weighting by social and environmental accountants than previously.

Teaching programmes and textbooks

Several specialist textbooks have been published since 1987. Gray *et al.* (1987) were almost certainly the initial leaders in this area; Parker *et al.*(1989) include social accounting as well as behaviourial accounting; and Gray (1990) is most important in providing an appropriate introduction to environmental accounting. There have also been a number of journal articles advocating or describing teaching programmes which involve the study of social and environmental accounting. These include Blundell and Booth (1988).

Regulatory frameworks

The structuration of accounting and reporting has continued during this period, with increased use of conceptual frameworks, accounting standards, and legal provisions to reduce the degree of individual interpretation in financial reporting. However, little of this accounting structuration applies to social and environmental accounting, which is largely independent of current conceptual frameworks for financial accounting and accounting standards.

Legislation related to environmental protection and case law has had some impact on the development of activities such as environmental audits. The most far-reaching piece of environmental legislation during this period was the US attempt to determine the financial responsibility for reclaiming contaminated land. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA), which has now been strengthened by the passing of the Superfund Amendment and Reauthorization Act of 1986 (SARA), is an effort to force the present users of land to clean up contaminated sites, even though they may not be responsible for the contamination. To recoup the costs, the current owners may claim from those who are proved to be responsible for creating the problem in the past and, if this is not possible, from a "superfund" which has been contributed to by industry at large. This type of legislation has the potential for influencing other legislators, for example, in Canada, a 1990 standard related to the removal of contamination and the restoration of sites (capital assets) (CICA, 1990). In the UK, a register of contaminated land must be compiled under the provisions of the Environmental Protection Act 1990. In both cases, there have been delays caused by the scale of the problem and legal obstacles (Gray *et al*., 1993, pp. 218-9).

As noted elsewhere, social accounting has received progressively less attention during this period, as environmental accounting became increasingly in vogue. The regulatory frameworks that existed in the social accounting area tended to be concerned with employee-related reporting in Europe, including the Bilan Social and the annual report disclosure requirements in the UK. Although not part of any legislation, the structured reporting recommended for social accounting by the Union Europeene des Experts Comptables, Economiques et Financiers (UEC, 1983) could have been effective in leading corporations to make more social disclosures in an organized manner.

Other reviews of the literature

During the period under review, there were few attempts to review the entire literature in the manner attempted in this paper, except as part of specific papers, or in developing other ideas such as in Gray *et al.* (1987).

Summary

In summary, the period 1981-1990 produced different patterns of publication than in the previous period. The empirical research was more analytical and less descriptive; the normative models which were a particular feature of the 1970s were largely absent, but in their place was a significant development in the philosophical debate about the role of accounting in disclosing information about social and environmental accounting activities and, later, about the nature of environmental problems and the type of reporting which would assist a wider range of users.

The radical/critical literature made up a larger proportion of the overall output during this period, extending into many aspects of accounting research. A less encouraging view of the attributes of social and environmental accounting was offered by Tinker (1985). The possibilities of using social and environmental accounting in educational programmes have been explored by a limited number of writers.

The period 1991-1995

Introduction

The last period (1991-1995) saw the advancement of environmental issues within accounting on a broad front, including interest from managers as well as accountants. This period was characterized by the almost complete domination of environmental accounting over social accounting, with perhaps the exception of Gray *et al*. (1995a, 1995b). The concerns of employees, information about products and instances of community involvement *may* be documented in annual reports, but there do not appear to be many accounting researchers who now report on these matters, and any commentary about what should be disclosed has disappeared from the accounting literature. A new journal entitled *Human Resource Accounting and Costing*, based at the School of Business, Stockholm University, may indicate a change in this trend. The disappearance of interest in social, as distinct from environmental, accounting has been noted by other commentators (for example Gray, 1995b).

Empirical studies

The special issues of *Accounting Auditing & Accountability Journal* and *Accounting Forum* (1991 and 1995 respectively) previously referred to, provided opportunities for researchers in the environmental area to report their findings. Empirical studies to determine the extent of environmental disclosures were carried out by Adams and Roberts (1995); Blaza (1992); Deegan *et al*. (1995); Gibson and Guthrie (1995); Harte and Owen (1991), 1992; Roberts (1991, 1992). There have also been a number of extensions from environmental disclosures into environmental auditing (Tozer and Mathews, 1994). More recent work demonstrates the ability of some contributors to combine an account of development to date with details of disclosures and an appreciation of the need for theoretical underpinnings (Gray, 1995a; Gray *et al*., 1995a, 1995b).

Normative statements

Recently, a number of contributors have attempted to model European attempts to provide for sustainability (Gray, 1992) and the Bilan Social (Bebbington, 1993; Christophe and Bebbington, 1992) and, in Canada, the Canadian Institute of Chartered Accountants (CICA) has provided a framework to guide members in their approaches to environmental auditing (CICA, 1992, 1993). Burritt (1995) has produced a model of environmental accountants as an "epistemic community" assisting with the problem of ozone depletion. Hines (1991) argues strongly against moves to value nature as simply another asset. These developments must be contrasted with the lack of interest in developing models of social accounting during this period.

Philosophical discussion

Much of the philosophical material in this period was included in the special issues already referred to, which makes them more accessible to newcomers to the discipline (Fiedler and Lehman, 1995) and in the literature developing the arguments in favour of environmental accounting (Owen, 1992). Other activities which have recently become of interest are sustainability (Batley and Tozer, 1993; Geno, 1995) and environmental auditing (Gray and Collison, 1991; Tozer and Mathews, 1994). Stone (1995) has contributed a discussion of the role of management accounting in assisting with sustainable development. Wildavsky (1994) provided one of the few contributions questioning environmental accounting, rather along the lines of Benston (1982a, 1982b, 1984) in respect of social responsibility accounting. Social auditing has been reappraised by Zadek and Reynard (1995).

Radical/critical literature

Radical contributions to the social accounting literature include Parker (1991) in "conversation" with Puxty (1991); Puxty *et al.* (1994), and Tinker *et al.* (1991). One message, promoted by many critical accounting researchers, is that the social and environmental area must guard against absorption by the accounting profession which would "institutionalize" them (Power, 1991) and recognize that attempts to keep to the middle ground are themselves problematic (Tinker *et al*., 1991). These issues have been incorporated into radical environmental contributions (Maunders and Burritt, 1991). Gallhofer and Haslam (1995) offer a critical view of environmental auditing.

Non-accounting literature

The main contribution to environmental accounting from other literature during this latest period was from the field of management and control and strategic planning – in particular, the development of environmental management systems (EMS). Gray *et al*. (1993, p. 49) noted once again that changes in policy and outlook are much more likely to occur when supported from the higher reaches of the organization – the "tone from the top" approach which will incorporate appropriate resources and structure, leading to the development of an EMS. Elkington and Jennings (1991) outline the processes involved in developing such a system, which may be seen as part of total quality management (TQM).

One conclusion that may be drawn from this literature is that accountants cannot initiate the development of an EMS approach from inside their discipline nearly as easily as they could from a managerial perspective. Ultimately it is the managers who make the policy and strategic decisions, and not the accountants who design and administer the systems.

During this period the strategic management literature included some material related to both social responsibility and environmental issues, although heavily weighted towards the latter. In particular, *Long Range Planning* published a number of articles, including a special issue dealing with environmental matters in 1992.

Vyakarnam (1992) reported on an examination of the annual reports of the top 100 UK-based companies. Although the approach is not exactly the same as that in the accounting literature, the results are generally similar.

In a critical examination of corporate environmental policy (CEP) in practice, Shimell (1991, p. 11) stated that, at that time, there were no more than "a dozen British companies with a total, structured CEP", and also comments that "the conference scene is dominated by the same 'green' roadshow of eloquent speakers with little experience of having actually worked with industry". This theme of "practical (and for specific organizations) versus theoretical" is found in other articles (Einsmann, 1992; Tuppen, 1993; van Engelshoven, 1991).

The importance of developing a strategy for corporate relations with the environment is argued by Azzone and Bertele (1994); Bhat (1992); Hutchinson (1992a); and Tuppen (1993). The role of the chief executive in developing environmental strategies and policies has been discussed by Hutchinson (1992b).

Technical issues appear to be of more importance in the strategic management/planning literature than in the accounting and related literature, for example, value-chain collaboration to assist recycling (Roy and Whelan, 1992) and value:impact assessment to reduce the impact on the environment (Hindle *et al.,* 1993).

Teaching programmes and textbooks

In recent times, there have been several textbooks and journal articles covering both social and environmental accounting. These include Mathews (1993); Owen (1992); and Perks (1993) which is a composite text addressing the role of accounting in society, and Mathews and Perera (1995), one of the few accounting theory texts which includes a chapter dealing with social and environmental accounting issues. Macve and Carey (1992), Gray *et al.* (1993), and Rubenstein (1994) concentrate on the environmental issues. Reviews of these books may be found in Bebbington (1995) and Owen (1995).

Lewis *et al.* (1992), and Mathews (1994a) consider the problems associated with incorporating new ideas into the accounting curriculum, while Gray *et al.* (1994), and Puxty *et al.* (1994) offer suggestions about the need for additional programmes to correct perceived problems in current accounting education. Owen *et al.* (1994) have reported on the state of social and environmental accounting education in British universities.

Regulatory frameworks

There is still little regulatory framework affecting social and environmental accounting disclosures, which are not recognized and included in either statutory requirements or conceptual frameworks designed to provide for disclosures in general-purpose financial statements. To date, conceptual frameworks for accounting do not extend to non-financial quantification and social or environmental issues.

However, legislation has provided for increased regulation of discharges to the environment, for example, in New Zealand the Resource Management Act 1991 is only one of a large number of relevant Acts detailed and discussed by Milne (1992). In Australia, Bates (1992) has outlined the extensive legal requirements relating to the environment. The US "Superfund" legislation remains in force and has influenced the Canadian profession to develop an accounting standard which relates to the removal of contamination and site restoration costs (CICA, 1990). Although Gray *et al.* (1993) were concerned with the slow progress of environmental regulation in the UK and Europe (p. 217), Ball and Bell (1994) have reported in depth on UK legislation in this area, and the profession in the UK appears to be providing members with guidance on environmental matters (Collier *et al*., 1993). Professional bodies in the USA and Canada are now providing members with assistance in dealing with accounting and auditing problems related to the environment (CICA, 1992; Specht and Buhr, 1994).

The development of a clear regulatory framework is getting closer in several countries. The regulation is not coming through the development of clear conceptual frameworks and standards by the accounting profession, except in Canada, but by way of legislation which is adapted and interpreted by the accounting profession in order that reports may be prepared and audited. The progress is uneven but, compared with that in the area of social accounting disclosures, it has been rapid during the past five years.

Other reviews of the literature

Gray *et al.* (1995a, 1995b) have provided a lengthy review of corporate social and environmental reporting as part of an empirical paper and a number of other contributions do the same thing. The texts referred to in the Appendix have a measure of historical review (especially Mathews, 1993). Mathews (1994b) was a limited and tentative attempt at reviewing activities over about a five-year period.

Summary

The period was one where publication interest in environmental accounting has outstripped that related to social accounting. One difference between the active period of empirical studies in social accounting and the corresponding period for environmental accounting is that the latter appears to generate a stronger personal commitment to the subject of the research. There may be less objectivity and detachment about research into environmental issues compared to the content of social accounting. This may be defended on the grounds that environmental issues are more fundamental to species survival!

There has been a relative lack of normative/philosophical work within accounting during this period, for example, in environmental accounting, the models of the 1970s have not been revived and adapted to the more receptive climate which might be more accepting of discussions about the valuation of externalities. Teaching and curriculum issues have been far more prominent over the last five years and, in most cases, both social and environmental matters are included in the discussion.

Discussion

This paper has recorded the results of a systematic examination of the published research literature in social and environmental accounting over a period of 25 years.

A number of trends were evident. In the first period, 1971-1980, the majority of contributions related to social and not environmental accounting and, in many cases, subsumed the one within the other. The empirical studies were mainly descriptive and not particularly sophisticated compared to later work in the area, and to studies in areas favoured by the mainstream journals. There were several models and similar normative statements, providing material which was a feature of the 1970s, whereas philosophical discussion was not widespread, with only a few contributions which attempted to direct attention towards organizational legitimacy as a basis for the development of new forms of accounting. The radical/critical theorist group had not emerged in SEAL at that time; the radicals were those academic accountants advocating social accounting! Teaching materials and programmes in environmental accounting and regulatory frameworks were conspicuously absent in this period.

In the second period, 1981-1990, the attention given to environmental matters increased dramatically, empirical studies were more thorough, there were fewer normative statements being made, but many more articles discussing philosophical issues, although the discussion of the basic motivation for the development of non-traditional disclosures was not extensive. The limited radical/critical literature provided an alternative view of developments, and a number of contributions were made towards the teaching of social and environmental accounting. The non-accounting literature, including that related to environmental economics, was used to develop and inform the philosophical discussion on the development of environmental accounting.

The developments of the period 1991-1995 were a continuation of the later years of the previous decade. In particular, the continued growth of environmental accounting, which has driven the research agenda and brought some new researchers into the field, has been quite spectacular. There has been a cost in terms of work in social accounting, which almost ceased during this period.

Writers in the field of critical theory have noted that the new developments do not often challenge the status quo, in that considerable attention is devoted to reporting what is disclosed, but not to actions which could change the underlying system. The normative/philosophical literature has not been strong in environmental accounting, and teaching programmes, while they have been put forward, do not appear to have made inroads into the space available for the overall undergraduate programme.

Additional developments in this period have included environmental audit. Unfortunately, most of this work has been outside of the accounting literature and discipline, particularly with the use of scientists and technologists. Once again the reluctance of accountants to move away from traditional attitudes and paradigms is limiting the advance of the discipline into new fields of endeavour. Strategies for meeting environmental problems from the perspective of management have been discussed in the strategic management and planning literature. As might be expected, in this literature, the view of the problems and solutions is more pragmatic, and driven by different imperatives than most other SEAL.

What is the current position of SEAL?

Twenty-five years of social and environmental accounting has produced a prodigious volume of literature, with further contributions in each issue of the less conventional/traditional journals (or those willing to experiment every now and again). Without *Accounting Auditing and Accountability Journal, Accounting Forum*, *Accounting Organizations and Society,* and more recently *Critical Perspectives on Accounting*, and *Advances in Public Interest Accounting*, the coverage would be much less developed, which leads to a fundamental question: why has social and environmental accounting not yet been accepted by mainstream accounting academia?

There could be at least five responses: first, the normative/deductive paradigm is not currently fashionable. Indeed, it has not been so since about 1970 and, at one point, social accounting advocates were given to producing models which could not be tested empirically and were somewhat ambitious in attempting to cover all possible/actual problem areas. Second, the methodology employed in attempting to answer empirical questions is underdeveloped and, therefore, the results are trivial and/or unreliable. This might have been so at one time, but is not the case today. A clearer statement of the generalizability of some of the findings might assist, but this is not always possible or even desirable. Third, the empirical question of what disclosures of social, and more recently environmental, information can be found in annual reports – type, location, quantification, reliability, veracity – is not the type of empirical work currently favoured by conventional/traditional journals. It does not test responses to hypotheses based on agency theory and is not directly connected with capital markets. The concept of usefulness of information to stakeholders acquires new meaning when additional stakeholder groups are recognized. Fourth, the empirical work currently being undertaken does not fit with the "scientific paradigm" demanded of research in many major academic institutions and, therefore, the majority of research journals. A final response is that academic accountants involved in social and environmental accounting research are often critical of the status quo, and not content to merely report on what exists. Therefore, their work is characterized as either normative/deductive or radical/critical. Neither paradigm is currently acceptable to many conventional/traditional research outlets.

It is worth noting that, despite the reactions of professional accounting bodies which, with some exceptions, have ignored the area, individual reporting entities have developed new forms of reporting. Although social accounting has been downplayed in the overall research agenda for several years, an examination of the annual reports of the larger corporations would reveal many disclosures recognizable as social accounting information. Similarly, larger organizations are also producing environmental reports, despite the lack of interest in these developments by most of the professional accounting bodies. The reasoning behind the acceptance by some managerial groups of the need to provide additional, socially-oriented, disclosures should be an important research area.

In view of the lack of acceptance of social and environmental accounting (SEA) by the accounting profession and by mainstream researchers, some would argue that a more radical approach is the only way to make an impact. Increasingly, the radical/critical theorists have examined the various areas within accounting to expose the value systems and partialities which lie within and behind existing practices. The outcome of this work has been intellectually stimulating and a major contribution to the literature of the discipline. However, do these approaches assist in a world where the accounting profession was developed to do no more than assist particular groups (that is providers and managers of capital)?

Although Tinker (1985) and Tinker *et al.* (1991) are powerful statements about the problems created by a narrow view of accounting as a value-free, technical discipline, which readers of *Accounting Auditing and Accountability Journal* will recognize is not the case, these well respected contributions do not offer alternative ways forward. In any evolution versus revolution debate, revolution does not suggest how we might proceed! Evolution suggests that those who wish to change the extent to which organizations report on social and environmental matters need to keep doing what they have been doing, only do more of it! Annual reports now include more SEA material than ever before, even though there are no statutory or regulatory frameworks relating to this material in most countries, and despite many professional bodies avoiding statements or measures of support. Clearly some within corporate management are taking notice. Alliances with other disciplinary areas may also be appropriate. Accountants have tended to argue that the content of the annual report should be left to them to decide and yet this has not proved to be a sustainable argument; some compromise of this position may now be necessary.

At the end of 25 years, a great deal has been achieved, although much more in the last 15 than the first ten years, and we do have something to celebrate.

However, there is no room for complacency, as indicated in the following observations.

The emphasis on environmental accounting in SEAL is frequently at the "very light green" end of the range of possible involvement. This position does not reflect the views of a large number of environmentalists and their supporters, but is probably a true reflection of the views of accountants and managers, who wish to modify the way the system works without seriously altering it. The possibility of "capture" by the current professional structure must be of concern to those who see environmental accounting as an opportunity to make fundamental changes to the way in which developed economies function.

The lack of support for environmental accounting from much of the accounting profession means that other groups are establishing themselves in this area, to the probable future detriment of the accounting discipline and profession. Corporate environmental management systems and related control systems are proliferating without much assistance by accountants. Once these groups are firmly established, they may resist a belated interest from the accounting profession.

There are still too few academics and institutions involved in social and environmental accounting, and many have been in the field for a long time; new blood is needed if the area is to take advantage of opportunities for interdisciplinary co-operation. It is difficult to see how this situation can be changed except through the educational process. The Centre for Social and Environmental Accounting Research (CSEAR) has increased the number of potential academics and institutions involved, through their annual summer school; and other bodies are beginning to follow suit, such as the Australian National University, with the symposium for which the original version of this paper was prepared.

The teaching/educational aspect has not reached a satisfactory level of activity and is needed if the next generation of academic accountants are to carry on the work, and if the professional arm is to be reformed. A satisfactory educational programme would be one where accounting theory and alternative forms of accounting received a level of emphasis equivalent to that given to conventional corporate accounting. Unfortunately there is no evidence of this occurring. Indeed, it is possible that the reverse is the case.

The emphasis on environmental accounting has tended to reduce activity in the field of social accounting. This is an undesirable situation since social accounting has a powerful agenda, much of which remains unfinished. In particular, the position of employee-related disclosures has been greatly reduced over the period since 1981.

Certain areas of interest have not received appropriate attention. For example, research is needed into the motivation of management for organizing/authorizing disclosures, as well as further work on the valuation of externalities of varying types.

Future directions

The author suggests that future directions for SEAL research could include the following, not necessarily in order of importance:

(1) First, continuing with the tradition of empirical research aimed at documenting and analysing what is disclosed in the areas of social and environmental accounting should be one of the future directions for SEAL. This work, although perhaps not accepted by conventional/traditional journals, is valuable as a record of the current state of organizational disclosure and, therefore, of the distance that remains to be travelled along the path to full accountability by economic actors.

(2) Second, by attempting to reactivate an interest in social accounting, preferably without taking away the current concern with environmental issues, researchers would provide a balance to research programmes. This should include all forms of research, including normative-deductive work in the field of human resource accounting theory and the recognition of various types of externalities.

(3) A third direction for future research would involve attempting to discover the reasons why management authorizes the accounting function to produce social and environmental information, even when the accounting profession does not show any interest. Some of the possible reasons include the social contract, organizational legitimacy, and attempts to impress the capital markets, but we do not know whether there are other motivating factors, or the relative importance of any particular influence.

(4) Fourth, reactivating the normative/philosophical research which led to the model-building attempts of the first period; it is now time to reactivate this type of research, particularly since there are now more journals to publish this type of work. It is also an area to which critical theorists may contribute, since they are unlikely to take up the other suggestions made above.

(5) A fifth direction could be to link research with teaching, and teaching with practice, through the development of the curriculum. Bebbington (1995) has provided an excellent review of the lack of connection between curricula and the services which accountants provide. Research is needed to investigate the extent to which curricula are determined by the profession, the academic institution, the individuals teaching the programme or various combinations of these groups.

(6) Sixth, by recognizing the contribution of other disciplines to SEAL. Much research by accountants will need to be of an interdisciplinary nature, developments which will provide challenges and opportunities different from those of the past, but also lead to a much richer set of data, or more comprehensive models for the solution of problems of social disclosures. The contribution from strategic management specialists and

the technical expertise required to address the technical problems of recycling and re-engineering will be necessary in the development of strategies for reducing impacts on the environment.

(7) Finally, in this list of suggestions, researchers in the social and environmental accounting field could co-operate with other groups of professionals in developing regulations, standards, policies and strategies for problem solving, particularly in the environmental area. The activities underlying SEAL are dynamic and very important and must not be seen as part of an esoteric, isolated and "academic" activity. Of all forms of accounting, the social and environmental is of paramount importance to a majority of stakeholders and, in the longer term, to all stakeholders.

Concluding comments

This paper has attempted to construct a classification for reviewing SEAL in order to provide an answer to the question given in the title. As part of this process, developments and trends in the literature have been observed, and strengths and weaknesses of past and present research patterns identified. The paper concludes with an examination of the present position and some suggestions for future directions. An extensive, though not exhaustive, bibliography has been provided as an appendix.

Fashions exist in accounting research, as in other areas of human activity, and the interest in social accounting, which took some time to develop, was rapidly swept aside by environmental accounting from the late 1980s. There are signs that social accounting may be about to make a comeback, but the evidence may be a year or two off.

The position of the critical theorists is changing (or perhaps has changed) from a time when attempts to develop social and environmental accounting were regarded simply as additional forms of legitimation by capitalist interests to a point where attention is being given to alternative forms of accounting. Once again, these contributions fall outside the time limits of this review.

Despite the clear success of the Centre for Social and Environmental Accounting Research (CSEAR) at the University of Dundee, in terms of developing networks and preparing future researchers, the failure to get social and environmental accounting into the undergraduate curriculum is a major disappointment. In general, the next generation of accounting professionals are almost as poorly prepared to evaluate new developments (and embrace them where appropriate) as were past generations. Accounting theory is too often simply the knowledge required to understand the pronouncements of the standard-setting bodies and is, therefore, an inadequate basis for considering new developments, including social and environmental accounting.

This situation is all the more regrettable since the interest in environmental issues has extended beyond accounting and accounting academics to include government agencies, the management and directors of corporations, and politicians, some of whom regard the issues as too important to be left to accountants. This last point may be the most important of all; accountants, whether academic or professional, must redirect their efforts before it is too late and they find themselves to be experts in a shrinking area of diminishing importance. One way to prevent this happening is to broaden the field covered by accounting to include social and environmental data, including environmental audit.

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Appendix

Note that, in the interest of saving space, only work that has been published has been included; conference papers, including those reported in proceedings, and newsletters have been excluded. Items may appear under several headings as appropriate.

Social and environmental accounting 1971-1980

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